New England Deaconess Hospital
Boston, Massachusetts

pulse

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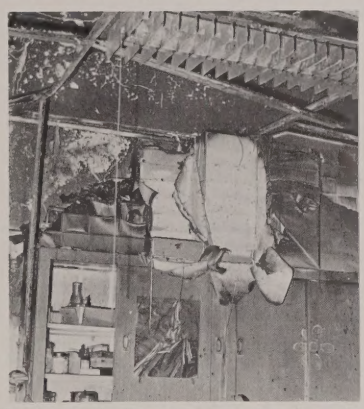
Fire destroys histology lab; employees rebuild lab within days

The histology laboratory on Palmer 1 was the scene of a fire on August 30. The fire began shortly before 1 a.m. when a tissue processor malfunctioned. Four night medical technologists detected smoke and notified the security department.

Ralph Burke, Robert Brown, Stewart Faulkner, Jr., and James Murphy, night medical technologists, were in the hematology laboratory on Palmer 1 when they heard noise down the hall. When they went to investigate the noise, they saw smoke coming from behind the door leading to the histology laboratory.



Pictured above (l.) is the tissue processor that caused the fire, and (r.) the damage to the laboratory.

Smoke from the burning tissue processor drifted up to Palmer 5 through ducts, alarming the nurses working on that floor. They also called the security department, who pulled the fire alarm.

The Boston Fire Department came soon after receiving the alarm and was able to control and extinguish the fire. Damage was confined to the histology laboratory.

Patient floors directly above the laboratory were not affected by the fire. There was no need to evacuate patients and there was no damage to the floors.

Fire and smoke damage to the histology laboratory was severe. All three tissue processors were destroyed, as were a microtome and knife sharpener. The heat melted plastic jugs and welded refrigerator parts together. Firemen broke all the windows to be able to effectively fight the fire. But there was no damage to stock material.

Dr. William A. Meissner, former chairman of pathology, Dr. Bradley E. Copeland, director of clinical pathology, and David Lilley, administrative assistant, administrator on call, arrived at 1:30 a.m., immediately after being notified of the fire. Dr. Merle A. Legg, chairman of pathology, was on vacation and did not learn of the fire until September 1, after the extensive repair had already been accomplished.

As soon as the fire was extinguished, a clean-up effort began. The medical technologists covered the auto-analyzers in the Palmer basement with cardboard and plastic to keep them from getting wet, and then joined Mr. Lilley and Drs. Copeland and Charles Przyjemski, clinical pathology resident on call that night, in mopping up the floors and sweeping up the debris.

Early Saturday morning, the start of the Labor Day weekend, employees from the laboratories, maintenance and engineering, building services, and administration interrupted their holiday weekends to join in the clean-up effort.

Frank Bettinelli, chief histology technician, made arrangements to continue the laboratory's work in other parts of the hospital and the city. Lilla Anderson, histology technician in

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Dr. Tullis opens series of medical lectures for residents

A new program of education for the residents of the department of medicine was instituted on Friday, August 29 at 12 noon in the classroom on Deaconess 3. The idea for the series of educational lectures is the brainchild of Dr. Murray Bern who completed his fellowship the end of June and who is a newly established member of the associate staff and Deaconess Medicine. It occurred to Dr. Bern that during his five years of residency and fellowship, although he learned a great deal about medicine, he had never had the opportunity to learn much about the distinguished medical history of the New England Deaconess Hospital. He conjectured that this would be an excellent addition to the residency program, in which he is an instructor, and he asked Dr. Tullis, chairman of the department of medicine, to be the first speaker. Dr. Tullis opened the series with a talk on the discovery and transfusions of frozen blood which were first made at the Deaconess in 1953.

Dr. Tullis traced events leading to the discovery of the process for freezing blood by explaining work done by Dr. Edwin Cohn as far back as 1930 when

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Photo-badges begin new security system

All employees were issued photo-badges last month and members of the medical staff are being photo-badged during October as the hospital begins its new security system. The photo-badges identify employees and medical staff of the New England Deaconess Hospital and should be worn at all times while in the hospital.

The photo-badge, initially used for identification, will become the key to System 7, the name for the new security system. System 7 is a computer activated system which will control entry into the hospital, the tunnels, and the parking garage. Employees will need to show or to use their photo-badges to enter these areas.

Primary entry to the hospital will soon be restricted to the Farr and Palmer lobbies. However, employees will also be able to enter the hospital through the tunnels at 110 Francis Street, the Cancer Research Institute, the Meissner Laboratory, and the Joslin Clinic by using their photo-badges as keys. The tunnel entrances will be monitored by television cameras and a two-way communication system to a control center in the security office. Authorized visitors will be able to show passes or other forms of identification to pass through these tunnel entrances.

Employees authorized to park in the Pilgrim Road parking garage will be able to use their photo-badges in place of the blue charge plates currently in use.

Examples of future applications of System 7 are that members of the medical staff will be able to sign in anywhere in the hospital by inserting their photo-badge into a System 7 box. The switchboard and reception desk in the Farr lobby will register the physician's presence automatically. Employees will also be able to use their badges to record payroll hours replacing the mix of manual and automated systems used presently.

An additional protection from illegal entry will be a controlled access to sensitive areas of the Deaconess, such as pharmacy and data processing. Only those employees whose photo-badges are programmed for such areas will be able to enter them freely.

These modest restrictions on hospital entry have been designed by System 7 for the safety and security of Deaconess employees and patients and to prevent trespassers bent on thievery or crime from entering the hospital.

All Deaconess employees must wear their photo-badges while at work. Setting the example are: (l. - r.) Luis Gonzalez, laundry; Ora Lopez, building services; Mary Anne Atkinson, patient services; Cornelius H. Keating, maintenance and engineering; and Laurens MacLure, president.

Intravenous therapy: a department that does more than start I.V.'s

A very visible member of the health care team is the intravenous therapy nurse. The I.V. nurse, always accompanied by a little box filled with the supplies that are the tools of the trade, can be seen at all hours of the day and night caring for patients in all parts of the hospital.

Headquarters for the 27 nurses of the I.V. department is in the basement of the Deaconess building. But the nurses are there only long enough to prepare their kits with tape, catheters, and the other supplies used in their rounds. Their real habitats are the patient floors

The I.V. nurses work very closely with the staff nurses. "We start the patient on an I.V. with a puncture using a needle or catheter. We leave the I.V. line and set up the patient so that the nurses can give ongoing intravenous therapy," said Myra MacDonald, R.N., assistant head nurse and in-service instructor in I.V. therapy. "The nursing staff actually hangs the bottles, giving the patient antibiotics every four hours and fluids every 24 hours."

Before nurses Josephine Crockett, Janet Epstein, and Diane Pelletier (l. - r.) see their patients, they stock their supply boxes with the tapes, catheters, needles, and sterile supplies they will use during their rounds.

Patient contact is not limited to starting I.V.'s. I.V. nurses do more than that.

"We see each patient twice a shift," said Mrs. MacDonald, "and check and monitor the fluids to see if the solution is too strong and needs to be diluted. We look at the needle sight and make sure that the patient is taking care of the I.V., according to the procedures we have taught, such as not lifting himself up in bed with that arm or waving the arm too freely

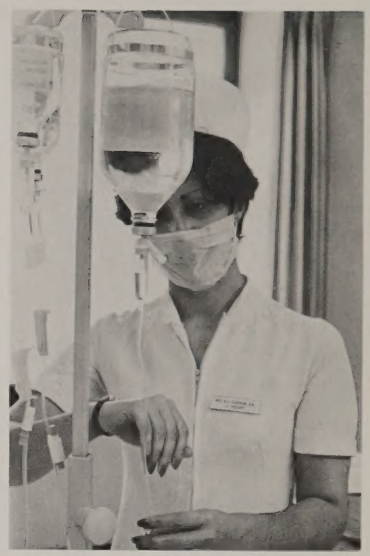
Kathy Wilson, R.N., head nurse in I.V. therapy, added that more than clinical ability goes into her work. The patient on I.V. therapy needs a lot of moral support.

"To the patient we are probably among the least popular people in the hospital. It's unpleasant to be stuck with a needle. Sometimes we have to start an I.V. more than once and I may be the second or third person to try," said Miss Wilson. "I have to convince that patient that I'm the one who's going to succeed this time. I must demonstrate that I know what I'm doing, that I have a job to do that will aid his recovery, and that I'm going to be as gentle and considerate as possible."

I.V. nurses receive special training at the Deaconess. Mrs. MacDonald conducts a one-month training program in which nurses learn well-defined procedures for each function they will perform: starting and restarting I.V.'s, retaping and checking I.V.'s daily, using armboards, changing lines every three days, giving blood components and heparin, drawing bloods, putting out plain I.V. bottles and changing them every 24 hours. They also learn to insert levine tubes and deal with hyperalimenation. They now rotate through the blood bank and later hope to develop an in-service program with other specialty areas, such as the laboratories and the intensive care units, because they often interrelate with these departments.

The training program starts with an introduction to the pharmacy department, which supervises I.V. therapy. The pharmacy provides I.V. therapy with the best access to information about new hyperalimentations, chemotherapy drugs, and antibiotics. I.V. nurses must be familiar with all types of drugs and must know which drugs are compatible with each other. They constantly refer to the admixture guide, a catalogue of the most commonly used drugs and their incompatibilities, compiled here at the Deaconess by Philip Pacella, assistant chief of pharmacy.

Because I.V. therapy interacts so closely with other departments, Mrs. MacDonald teaches an in-service education program to acquaint people with her department. The nursing staff receives a clinical demonstration. She sees medical students, students from the school of nursing, and nurses from the recovery room, intensive care unit, and observation unit.



Periodic monitoring of an I.V. is an essential part of quality care. Maliheh Soverow, R.N., sees each of her patients twice a shift.

"Many people have the misconception that we are totally responsible for the I.V. I strive to have each department realize its role as part of the I.V. team. We stress the importance of working together to prevent and correct problems, rather than our having to be called after a problem occurs," said Miss Wilson.

But an I.V. nurse has special skills that cannot be duplicated. Not everybody can start an I.V., and this fact was recognized many years ago by Dr. Shields Warren, then Pathologist-in-Chief. He realized that there is a technique to finding veins, especially in those patients whose veins are least obvious. Also with the initial crude medications, there was a much greater probability of reaction, and Dr. Warren was instrumental in the hospital's recognition of the fact that specially skilled personnel were needed to counteract such reactions.

Because many patients at the Deaconess have diabetes or are under chemotherapy, their veins are much more complex and difficult to enter. Starting an I.V. is intricate and requires special attention to keep it running smoothly. I.V. nurses are specifically trained to handle such situations. They are often called by the laboratories or the blood bank to draw blood. They may help the x-ray department inject a dye for bone scans.

They initiate infusion of all different blood components, such as platelets or whole blood. I.V. nurses work closely with the hyperalimentation nurse, Chris Shaw, and are responsible for checking hyperalimentation patients in Miss Shaw's absence. Many hyperalimentation patients have individualized routines and are on pumps because the solutions must be delivered at specific rates.

Intravenous therapy has become much more than starting an I.V.

Myra MacDonald, R.N., teaches an I.V. therapy orientation class to all new I.V. nurses. She also goes on the units to give in-service education to nurses in specialty areas.

Kathy Wilson, R.N., consults with Richard Reardon, manager of purchasing, on various I.V. supplies, such as pump tubing, cassettes, and catheters.

Service award luncheon honors employees

Executive Vice President R. D. Lowry (far left) and President Laurens MacLure (far right) congratulate long-term employees Samuel Marotta (l.), barber shop, 30 years; Virginia O. Diggdon, ambulatory services, 35 years; and Dr. Bradley E. Copeland, director of clinical pathology, 25 years.

The service award luncheon, held at Children's Inn on August 20, brought together members of administration and those employees who have given five to 35 years of service to the Deaconess. After words of welcome from Director Richard E. Lee and President Laurens MacLure, Executive Vice President R. D. Lowry invited everyone to share his memories of the last 35 years.

Mr. Lowry said that five years ago a visitor was so impressed by the dedication of the hospital's employees, that he donated $6,000 to the Deaconess to be used for the employees. The donation was responsible for redecorating the cafeteria. Five years ago the blood bank urgently needed donors.

Ten years ago patient services was established. Service coordination had a trial run on Palmer 4, and Palmer 6 was built to take care of the space problems of the laboratories. Blood donors were urgently needed by the blood bank.

"Fifteen years ago the Alpha Credit Union was paying three percent interest and had just begun to offer automobile loans," said Mr. Lowry. "And guess what – the blood bank urgently needed donors."

"We broke ground for the Central Building 25 years ago," said Mr. Lowry. "But the highlight of the year was the bowling banquet at the Latin Quarter and the new traffic light on Deaconess Road so there would be no more problems in crossing Brookline Avenue."

Thirty years ago the budget for the entire hospital was one-third of what the laboratory's budget is this year. The hospital's rates increased to $6 per day for wards, $7-$8 per day for semi-private rooms, and $8-$16 per day for private rooms. And the barbershop opened.

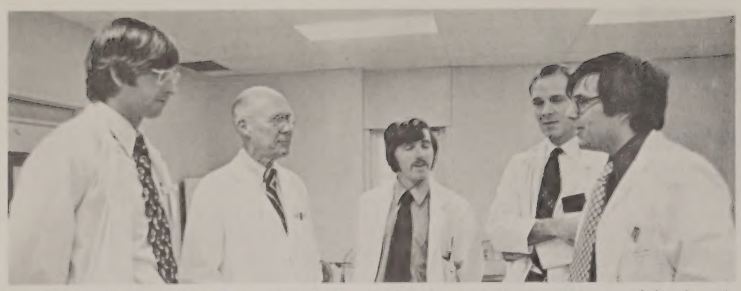
"At the executive committee meeting 35 years ago, there was 'grave concern' over the financial condition of the Deaconess," said Mr. Lowry. "The hospital's monthly telephone bill was $75 . . . But all was not glum. That was the year Virginia Diggdon joined the Deaconess."

Five-year award recipients are: (l. - r.) Kathleen A. Giblin, administrative services; Isabella W. Erskine, Margaret M. Gilboy, purchasing; Dorothy M. Casale, patient services; Carol Stuyvesant, Mary Lou Rawson, dietetics; Marcia F. Stowell, chemistry; and James F. McCormick, maintenance and engineering.

Hubert D. Sycamore (l.), assistant director, and Dean A. Annis (r.), controller, celebrate 15 years of service with a handshake from Executive Vice President R. D. Lowry (far left) and President Laurens MacLure (far right).

Five-year award recipients are: (l. - r.) Thaddeus K. Szarek, maintenance and engineering; Generosa R. Ruiz, laundry; Margaret Ferrante, chemistry; Lucille M. Stanley, central sterile supply; Richard J. Guzikowski, and Simon R. Ellis, chemistry. Those who could not attend the luncheon were Paula Ainsworth, School of Nursing; Helen E. Barnes, nursing service; Nancy J. Browning, Barbara E. Buckley, ambulatory services; Marjorie C. Burgess, Paula C. Depalma, nursing service; Phyllis L. Gaydos, School of Nursing; Ramon Gonzalez, Ramon D. Gonzalez, dietary; Marcelina M. Leyva, building services; Dr. Simeon Locke, neurology; James F. Murphy, chemistry; Linda M. Murray, nursing service; Patricia L. Nilo, histology; Genovefa Ortiz, laundry; Doris D. Polaski, ambulatory services; Jack Rebman, maintenance and engineering; Dr. Randi Rosvoll, boold bank; Teresa M. Salgado, laundry; Louise A. Sutherland, dietetics; Marjorie W. Walsh, administrative services; and Lanell A. Wright, ambulatory services.

Ten-year recipients are: (l. - r.) Dr. Olga Greengard, Cancer Research Institute; Lucy W. Dean, chemistry; Irene C. Hamel, School of Nursing; and Jean M. Hopkins, nursing service. Other recipients, Algeria M. Billings, nursing service; John E. Cormack, recovery room; Luz M. Hormoza, laundry; Mattie B. Jacks, nursing service; Dr. O. Stevens Leland, Jr., cardiology; Barbara E. Martin, chemistry; and Carolyn M. Russell, nursing service, could not attend the luncheon.



Discussing the talk on frozen blood given by Dr. James L. Tullis, chairman of the department of medicine, are: (l. - r.) Dr. Thomas Noble, chief resident; Dr. Tullis; Dr. Len E. Ennis, second-year resident; Dr. Gerald P. Yukevich and Dr. Wayne S. Wild, third-year residents.

Medical lectures . . .

(Continued from page 1)

Dr. Cohn separated proteins from whole blood and other tissues. The extract obtained could be given in tiny amounts to patients having pernicious anemia to keep them in remission. The extract later became known as B_{12}. A number of years later, during World War II, a colloid was needed because of the impracticability of storing and transporting large amounts of whole blood. Using the same technique he had developed for extracting proteins from organs, Dr. Cohn was able to devise a procedure for separating albumin, fibrinogen, gamma globulin and many other trace elements. Because of the nature of the work, he was named a University Professor at Harvard in 1947.

At that time, Dr. Tullis was a post-doctoral fellow in chemistry studying leukocytes. He was invited to work with Dr. Cohn, who wanted to re-do his work with whole blood in order to study the fractionation of plasma. It was during this work that Dr. Cohn invented a sterile centrifuge permitting the separation of blood products directly from an attached donor.

In 1950 Dr.Cohn and Dr. Tullis were invited to present a paper at the International Society of Blood Transfusions held in Portugal. At the same meeting an experiment was presented by Dr. Aubrey-Smith on the freezing of bull sperm and red cells. Dr. Cohn immediately recognized the practicality of the procedure involving glycerol if a way could be found to remove the glycerol from frozen blood without crystallization. Dr. Tullis was assigned the task of "getting the glycerol out."

Four methods were used to attempt to freeze and thaw blood and although they were all successful, Dr. Tullis explained why three of them proved impractical. He then explained the one method that met all requirements – the elimination of crystallization by a penetrating additive like glycerol. When glycerol is added to blood it pushes out the plasma. Then it displaces the intracellular water (about 80%) so there is too little water left to crystallize. In thawing, lactate or a similar material is used to bind the water outside until the glycerol is removed. Otherwise water would rush in too quickly and the cells would burst. Dr. Tullis showed slides of a machine used in the process. He credited Robert Tinch, the research associate who has worked with him for over 20 years, with much of the engineering concepts upon which the machine was built.

Dr. Tullis told the audience that the perfected process of freezing and rethawing blood was actually accomplished right here at the Deaconess and the first two units of frozen blood ever transfused in North America were done here in 1953. He said other processes have been devised since, that are also successful, but he is most pleased with the rate of acceptance of the method devised here. Frozen blood is now used safely in many ways and is especially effective in eliminating the transference of hepatitis.

Fire destroys histology lab . . .

(Continued from page 1)

C.R.I., donated her laboratory, and Dr. Blaise Gentile, the pathologist at the Public Health Hospital in Brighton who was a pathology resident at the Deaconess, offered the use of his hospital's laboratories. Mr. Bettinelli also used a spare tissue processor on Palmer 6 so that the histology laboratory was able to process all surgical specimens.

Lenny Cipullo, supervisor of building services for the Palmer building, organized workers in his department. Public Relations was called and arranged to have Executive Vice President R. D. Lowry take pictures of the damage for the insurance company.

Cornelius H. Keating and Charles Spalding, Sr., maintenance and engineering, cut short their vacations to coordinate their department's work.

The histology laboratory was emptied of its equipment, chemicals, and supplies. All burned debris and lighting, broken glass, and the dropped ceiling were removed.

Then maintenance and engineering went to work washing the walls, painting, replacing the electrical wiring, making a new dropped ceiling, and installing new windows. Most of the laboratory was ready for use by September 3 because of the extensive efforts of Lloyd J. Amerault, Fred Coderre, Sr., Donald R. Cobb, Angelo A. Derocco, Dino I. Fantegrossi, Richard Hatch, Alan E. Kelson, Joseph Marangiello, John J. Tector, Edgars L. Veisbergs, James C. Lussier, Everett N. Nickerson, and Salvatore Triolo.

As equipment loaned to the histology laboratory arrived during the week, Mr. Bettinelli could reduce his trips to the other laboratories. He had been transporting and loading specimens for processing in the other laboratories early in the morning and late in the evening since the fire.

By September 7 the histology laboratory was totally back in business. You could hardly tell there was a fire. Everybody, no matter what his or her job description, pitched in to help put the laboratory back in operation. Many employees gave up what could have been a relaxing Labor Day weekend, with friends and families, to come to work.

SIX STUDENTS COMPLETE RADIOLOGIC TECHNOLOGY PROGRAM. *Ruth Ann McNamara, Jennifer Williams, Sandra Donlan, Deborah Glaiel, Betty Scholz, and Joseph Messina (pictured l. - r.) graduated on September 2 from the New England Deaconess Hospital Radiologic Technology Program held in coordination with Northeastern University. The two-year program alternates classes with practical training at the hospital and leads to certification by the American Registry of Radiologic Technologists. Robert Clark, administrative assistant and technical director of the x-ray department, is the technical director and Robert Haydon, chief technician, is the coordinator of the program, which has been in existance at the Deaconess for 14 years.*

New England Deaconess Hospital
185 Pilgrim Road
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The New England Deaconess Hospital is a 471-bed and 16-building complex. Physicians from the Joslin Clinic, the Lahey Clinic, Overholt Thoracic Clinic and the independent medical and surgical staffs serve the needs of their patients at the hospital. The Deaconess is internationally known for diagnosis, treatment and research in brain and chest surgery, cancer, diabetes and general medicine, and is affiliated with Harvard Medical School.

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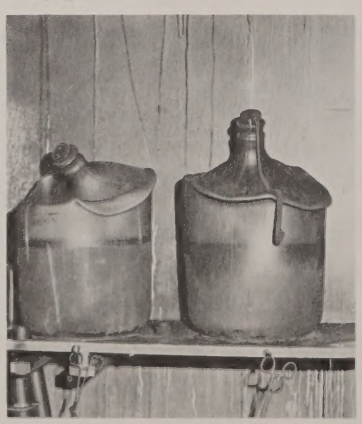
FIRE DESTROYS HISTOLOGY LABORATORY: See pages 1-4.



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